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## The Impact of Executive Doctoral Programs on Management Practice

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## EDITORIAL NOTE

Executive Doctoral Programs (EDPs) in business and management have become common alternatives to traditional PhD programs. EDPs offer experienced business and management professionals the opportunity to study for a terminal degree by combining their practitioner experiences with rigorous engaged scholarship capabilities. The basic rationale for these programs is that today's leaders need generic knowledge about complex problem solving and evidence-based management. The reasons include the radical growth in readily available data about business practices, the increased speed of change related to technology, globalization and business models, and, that leaders can build such knowledge through engaged scholarship activity. Despite the advances in such doctoral programs, we know little about the actual impact EDPs have on management practices. Bulger, Lyytinen and Salipante's essay fills this important gap by suggesting a dynamic model of the impact that rigorous training in engaged scholarship can have on experienced business and management practices. By applying grounded theory to survey data from the EDP at Case Western Reserve University's Weatherhead School of Management, the model captures how a student's cognitive development, identity transformation and community belonging may lead to career mobility through constant interactions with the practical and the academic realm. As such, Bulger, Lyytinen and Salipante invite us to engage in a much-needed debate over the personal and practical impact of EDPs by developing the model further through empirical research and by applying its various elements to critically review existing programs and improve their impact on management practices.

## The Impact of Executive Doctoral Programs on Management Practice<sup>1</sup>

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### ABSTRACT

Although the prevalence of Executive Doctoral Programs (EDPs) is increasing, little is known about their influence on management practice. To support further research and debate into this important area, this essay presents a dynamic model of EDP impact and discusses how the model can help reorient current knowledge on practitioner-scholar behaviors and careers. The model identifies six dimensions of EDPs' personal impact: 1) cognitive development, 2) academic contribution, 3) practical impact, 4) career mobility, 5) identity transformation, and 6) community belonging. In addition, it identifies eight activities that represent EDPs' practical impact: 1) direct management application, 2) teaching or educational engagement, 3) consulting or coaching, 4) knowledge productization, 5) engagement in communities of practice, 6) creating communities of practice, 7) public speaking, and 8) influencing policy. The model is developed based on evidence from a grounded theory analysis of survey data from the EDP at Weatherhead School of Management. In conclusion, we discuss how the various stakeholders in EDPs can leverage and further develop the model and its various elements to increase the influence of practitioner-scholars on management practice.

<sup>1</sup> We express our gratitude to Mimi Lord and Kathy Buse, two PhD alumni from Case Western Reserve University's executive doctoral program, and to the alumni council of 2013, whose members helped to conduct the surveys that resulted in some of the data corpus. We also are thankful for their initial data analysis. Additional thanks go to Richard Boyatzis and Beth Fitz Gibbon for their comments on an earlier version of the manuscript, and to three anonymous reviewers and Lars Mathiasen for their highly constructive comments.

## INTRODUCTION

Executive Doctoral Programs (EDPs) are graduate-level programs directed at fully-employed, experienced professionals with about ten years of meaningful post-baccalaureate work experience and an MBA or equivalent graduate degree (EDBAC Bylaws, 2015). EDPs are designed to address the gap in knowledge use and influence that arises between the management academy and practice (Rynes et al., 2001). They also are viewed as an integral element of an expansive, life-learning model of management education with distinct pedagogies, content, and affective response involving a change in identity (Boyatzis et al., 1998). The broad purpose of these programs has been to prepare graduates to operate in complex managerial settings in ways that help improve these settings. Like the spread of evidence-based medical practices in recent decades (Barends, ten Have, and Huisman, 2012), evidence-based managerial practices requires as a critical component doctoral education that moves in the direction of applied research. In line with this movement, these programs seek to have a lasting influence on managers' cognition, motivation, and practical activities by engaging students in rigorous and relevant problem-driven research that addresses managers' self-identified problems (Salipante and Smith, 2012), as well as in associated educational processes that expand the students' theoretical, methodological, and communication skills.

The management and improvement of EDPs should also be evidence-based. Although some attention has been given to the effects that teaching evidence-based management in masters programs has on students (Goodman and O'Brien, 2012; Jelley, Carroll, and Rousseau, 2012), research on the same in doctoral programs is lacking. Drawing on 20 years of experience in running EDPs, we are now starting to garner sufficient evidence to evaluate the practical effects of such programs and

to identify their potentially novel effects on management practice. Because EDPs have the goal of educating practitioner-scholars, any assessment of the program should include the program's effect on the academy and on scientific endeavors. Because most doctoral programs—including EDPs—identify, use, and largely honor related measures, such as publication quality, citation numbers, h-index, and others, we do not concentrate on how to assess such measures.<sup>1</sup> The real need for EDPs is to create measures of *practitioner-scholarship* that can truly capture the programs' influence on managerial practices.

To move beyond current narrow measures geared toward academia, we need to evaluate how *practitioner-scholars*—who *work and live* in practice—behave and feel. We also need to observe how and the extent to which they engage in practice settings and influence other practitioners in ways that matter. These needs raise a critical question not deeply examined in the past: What is the influence of executive doctoral programs on managerial practice? Management education veterans Kim Cameron and Denise Rousseau challenge us to identify such impact in their 2015 review of Weatherhead's Doctor of Management program:

Practitioner-scholars are a distinct kind of professional and their impact is likely to be multifaceted. It is important that efforts be undertaken to assess this impact and then to expand it. Are they designing new intellectual content for consulting practices or executive education? Are they forming new kinds of networks and alliances to solve practice problems? Have they implemented major successful changes? In addition to identifying how practitioner-scholar alumni might practice differently in their organizations and communities, the Program administrators may want to consider whether their knowledge prod-

ucts go beyond print or text. (Cameron & Rousseau 2015 pp. 7)

Pressure to evaluate such practical effects also is expressed in the recently updated accreditation requirements of the Association to Advance Collegiate Schools of Business (AACSB). These requirements expect program assessments to "[p]rovide a portfolio of evidence, including direct assessments of student learning, that shows that students meet all of the learning goals for each business degree program. Or, if assessment demonstrates that students are not meeting learning goals, describe efforts that the unit has instituted to eliminate the discrepancy" (AACSB, 2017). If EDPs seek to address salient management problems and create behaviors that help address them, then changes in students' behaviors and expectations need to be evaluated as part of the overall program assessment. This evaluation calls for examining the range of effects that these programs' students and alumni have on managerial practices.

This essay begins to address these challenges and to inspire further research into and debate about EDPs by identifying the primary elements of practitioner-scholar influence, which fall into two categories: (1) *personal impact*—reflecting dimensions of students' practitioner-scholar competency development during and after the program, and (2) *practical impact*—reflecting activities carried out by students and alumni as they engage with and influence managerial practices. The essay is an initial step in addressing the challenges identified and is expected to lead to the development of more rigorous instruments that can assess such effects. To inform and support our model, we draw on qualitative data collected from a survey of the alumni of the oldest EDP program in North America: Weatherhead School of Management Doctor of Management Program. Our goal in analyzing these data was to identify critical

<sup>1</sup> Publicly available sources of such statistics include Web-of-Science, Scopus, and Google Scholar.

dimensions of alumni competencies and related activities that have been the most germane for alumni as they wield practical influence. (For further details on how this research was conducted and the nature of the data, see Appendix A.)

Research to date on EDPs' effects has focused primarily on evaluating the cognitive content delivered and its influence by comparing program goals, course content, pedagogy and delivery mechanisms, and the role of mentoring during related research (Banerjee and Morley, 2013; Gill and Hoppe, 2009; Tenkasi, 2011). Because of the uncharted nature of the topic, our development of the practical impact con-

structs remains tentative and exploratory. Ultimately, proper measures of practical impact can only be created through sustained longitudinal program evaluations that systematically assess the changes in student and alumni competencies and activities and also assess how the changes affect alumni's practices—as well as the outcome of these practices—when the alumni act as practitioner–scholars.

The remainder of the essay is organized as follows. We first discuss the role and influence of knowledge processes in management practices to provide initial grounding on how to analyze the influence of knowledge on practice. Second, we dis-

cuss six dimensions of personal impact: 1) cognitive development, 2) academic contribution, 3) practical impact, 4) career mobility, 5) identity transformation, and 6) community belonging. Third, we discuss eight activities of practical impact: 1) direct management application, 2) teaching or educational engagement, 3) consulting or coaching, 4) knowledge productization, 5) engagement in communities of practice, 6) creating communities of practice, 7) public speaking, and 8) influencing policy. Fourth, we draw on these elements to present a dynamic model of EDP impact and discuss how the model can help reorient current knowledge on practitioner–scholar behaviors and careers.

## PRACTITIONER SCHOLARSHIP

Past research on the practical influence of academic management research emphasizes translation (Mohrman et al., 2011), as well as accessibility and presentation (Rousseau 2006). This focus on research outputs overlooks the role that academically trained individuals can play in embodying and bridging the gap. Issues of generating and embedding scholarly knowledge and applying it in contextual management practices are only beginning to be considered in postulating organizational factors that favor the use of evidence-based decision-making (Speicher-Bocija and Adams, 2012). Past systematic reviews have indicated that empirical research is lacking on these and other factors pertaining to the managerial use of research-based knowledge. Evidence of its efficacy is missing, inviting additional research (Reay, Berta, and Kohn 2009). As such, scholars need to study the interplay between management research and practice (Keiser, Nicolai, and Seidl, 2015) and recognize germane processes and conditions that shape how research knowledge becomes embedded and acted on in managerial communities of practice. Debates persist about the results of joint

engagement (Hodgkinson and Rousseau, 2009). Critics argue that expecting to achieve both rigor and relevance is untenable because academics and managers operate in separate social worlds (Kieser and Leiner, 2009). However, practitioner–scholars span these two worlds, providing stimuli and guidance that help the practicing manager work through a problem using systematic inquiry and knowledge application. Practitioner–scholars who have the requisite social competencies can influence their managerial communities because they are respected for their managerial achievements and their local, invested knowledge. At the same time, these managers belong to the community of practitioner–scholars, meaning they possess scholarly skills that complement their practical skills.

In dealing with wicked problems (Rittel and Webber, 1973), practitioner–scholars engage in a “Mode 2” type of scholarship (Gibbons et al. 1994; Tranfield and Starkey, 1998; Aram and Salipante, 2003). This mode co-exists with Mode 1 scholarship, which predominates in academic settings. Mode 1 is characterized by rigor-

ously produced knowledge disseminated via peer-reviewed journals and associated professional activities within narrowly defined fields. In contrast, Mode 2 systems of knowledge production are pursued by those in practice and driven by the need for current solutions to specific problems. The ultimate worth of the knowledge in Mode 2 is determined by its utility in practice, where currency matters. Problems range from local, such as how to improve leadership development in family-owned businesses, to “grand challenges” for society, such as corruption, crime, income inequality, gender inclusion, and climate change.<sup>2</sup> The inquiry process in Mode 2 research is like models of transformative, impactful research that have recently shaped research policy and programs in all government research funding agencies, including the National Institutes of Health (NIH) and National Science Foundation (NSF). Knowledge in these settings is transdisciplinary, expected to converge from heterogeneous, local, and specialized knowledge sources. These settings can be short-lived and highly varied. Rather than being distributed solely through publication, knowledge also spreads and

<sup>2</sup> All these themes have been subjects of thesis work in Case Western's doctoral program.

gets transformed by multiple social mechanisms, such as individuals moving to new projects. The influence of practitioner scholarship needs to be studied with an understanding that managerial knowledge is highly specialized, invested, and constantly circulating in communities of practice (Lave and Wenger, 1991; Seely-Brown and Duguid, 1991). Achieving “impact” calls for soft skills, such as identifying, engaging, and mobilizing key leaders in communities of practice and networking. Criteria for judging impact include the immediacy with which the knowledge reaches and becomes mobilized for application in managerial networks.

Mode 1.5 has been proposed as a synthesis of Modes 1 and 2 (Huff, 2000)—a synthesis of rigor and relevance that practitioner–scholarship pursues (Salipante and Aram, 2003). Such a synthesis is consistent with *evidence-informed* management, wherein high-quality decisions are influenced not only by research-based evidence, but also by contextual factors (Tranfield, Denyer, and Smart, 2003). Membership in communities of managerial practice provides practitioner–scholars with legitimacy and social knowledge concerning local realities. However, influencing practice toward the successful use of rigorous evidence requires that practitioner–scholars possess both scholarly and social competencies—the latter because people in practice often resist such evidence (Giluk and Rynes-Weller, 2012). Incorporating evidence requires overcoming processes of everyday managerial decision-making, calling for practitioner–scholars to model and exercise systematic decision-making processes. These processes involve reflective, critical, and ethical thinking (Rousseau, 2012).

In sum, concepts of practical knowledge generation and of practitioner scholarship provide an alternative lens to that of traditional academic pursuits. This lens is necessary to inquire into the influence that graduates of Executive Doctoral Programs and similarly disposed and skilled managerial leaders can have when they engage with managers. The lens calls for focusing

on processes that produce practical and relevant research-based knowledge and for incorporating these processes and their findings into managerial decision-making, drawing on social competencies. Such processes benefit from membership in managerial communities and from competencies in overcoming barriers common to managerial decision-making.

## PERSONAL AND PRACTICAL IMPACT

Based on insights from our research into the Weatherhead EDP (see Appendix A), we organize the effects of EDPs into personal and practical ones. First, we present and discuss six dimensions of EDP personal impact; second, we present and discuss eight activities of practical impact that have been enabled by and promoted through program participation.

### Dimensions of Personal Impact

We identified six main dimensions of personal impact engendered by an EDP: 1) cognitive development, 2) identity transformation, 3) community belonging, 4) career mobility, 5) academic contribution, and 6) practical application. These six dimensions formed distinct, identifiable categories of the program’s influence and provided a tentative classification of dimensions with which to evaluate the program’s influence both during and after participation in it. The six dimensions suggest that EDP students experience deep cognitive, affective, and identity-based changes during and after the educational intervention. Moreover, the changes in all these dimensions appear to be critical in creating the identity of a practitioner–scholar who can contribute directly to both the academic and managerial communities and can advance in his or her professional career with a fresh set of expectations and new role identities. Two of the personal impacts belong to an academic realm (cognitive development, academic contribution); two others relate to an applied/practical realm (career mobility, practical application); and the last two cut across or facilitate the shifts between

the two realms (identity transformation, community belonging). Together, they provide a set of dimensions that in a balanced way are manifested in the profile of a practitioner–scholar. We next review each of these dimensions and discuss their interdependence during the development of a practitioner–scholar.

The dimension of *Cognitive Development* manifests as changes in the way the students and alumni think about the business environment, in how they identify and analyze evidence, and in how they make inferences. *Academic Contribution* represents skills and expectations related to adopting scholarly roles within the academic community; they include new cognitive skills needed to advance and disseminate research designed in the program and skills acquired for academic teaching. *Career Mobility* entails changes in student and alumni career paths, based on both the cognitive skills that generate alternative prospects for future careers and the perception needed to imagine formerly unseen opportunities in jobs and careers that can advance the intellectual leadership and growth of students and alumni. *Practical Application* represents the dissemination and application of student research, as well as of more general research knowledge, in managerial communities. *Identity Transformation* represents changes in the way the students and alumni see themselves in relation to others and in the relationships that define their professional identity, based on the cognitive, academic, career mobility, and practical application impacts they’ve experienced. *Community Belonging* entails the expansion and opening of students’ knowledge and social exchanges as they engage in new types of community participation and community building in their existing or new communities of practice (e.g., scholarly communities). In this respect, students often become bridges in developing new types of social networks. The new types of community belonging create for students and alumni new, positive, affective experiences of fitting in and being an important part of socially rewarding and significant infor-

mation exchanges, both in academic and practitioner communities.

Based on alumni responses, we also conjecture that the elements of cognitive development, identity transformation, and community belonging happen *concurrently* both during and after the program. Many of the effects were experienced simultaneously and at the same stage of alumni development as they moved from being students to being fully engaged practitioner scholars. In addition, the impacts tentatively suggest significant precedence relationships in that some come before other types of impacts.<sup>3</sup> Cognitive development seems to form the anchoring point in that it precedes, connects to, and intertwines with all other impacts. Students undertake and participate in the program with an expectation of significant cognitive development. However, our analysis suggests that it needs to be integrated and augmented with ongoing identity change, which enables new types of career mobility and contributes to community belonging. Likewise, practical application is anchored in cognitive development but also results in or precedes community belonging and identity transformation. Based on these relationships, we conjecture that none of the advances alone is sufficient and that all of them are necessary for creating practitioner-scholar skills and identities. The program's impact ultimately is a jointly generated transformative outcome that most study subjects reported after completing the program—for example, expressed in statements like “I think differently, approach issues differently, talk and interact differently, and have different colleagues and friends.”<sup>4</sup>

Generating knowledge products and publishing as part of the academic contribution expand the scope of student and alumni intellectual work to new types of

activities. These actions influence most other activities in which the students and alumni participate; their effects include higher levels of practical application and promoting identity transformation. Many students noted in their survey responses that they start feeling alien among their former colleagues and friends because they approach and see things differently, use different language, and make different types of inferences. These experiences provide feedback for students' continued cognitive development and change their perception of self, creating a different sense of belonging.

Toward the end of the program, the concurrent effects of cognitive development, academic contribution, practical impact, and identity transformation seem to allow students to see increased possibilities for career mobility. They often begin to see themselves as a practitioner-scholar because of the effects on cognition, identity, and practical applications. At this stage, students often become active participants in practitioner-scholar communities, where some forge relationships within student cohorts or alumni networks. These communities might expand to new kinds of professional networks within the student's professional field, and some expand to purely academic communities (e.g., Academy of Management, American Accounting Association, American Marketing Association, and Association for Information Systems). Such students begin to search for and identify new opportunities and shape their career toward new and often unanticipated directions. We often have heard students say at a later point in their study: “I came to address this problem X,” or “I came to get the degree to be able to teach at the university because I have this opportunity.” However, as they near completion of the program, they more often say, “I can now see myself returning to practice with the hope of having

a new kind of impact, or starting a new consulting business, or initiating a new project.” In combination, these deep cognitive, affective, and identity changes invite students to more actively take advantage of emerging opportunities.

At the community level, we speculate that the four dimensions of cognitive development, identity transformation, career mobility, and community belonging positively influence students' academic contributions, both directly and indirectly, which then permits them to expand the scope of practical knowledge application.

### Activities of Practical Impact

Our analyses paint a rich landscape of managerial contexts and behaviors that enable or contribute to new knowledge applications by EDP students and alumni. We have identified eight activities of practical impact: 1) direct management application, 2) teaching or educational engagement, 3) consulting or coaching, 4) knowledge productization, 5) engagement in communities of practice, 6) creating communities of practice, 7) public speaking, and 8) influencing policy. These activities vary in terms of the research intensity and expectation of rigor, the type of knowledge being transmitted or transformed, the expected direct value of the knowledge, and the size of the audience. These activities also differ according to which side of the scholarly vs. practical divide the engagement bears the greatest weight. For example, teaching is quite close to academic identity and contribution, while influencing policy weighs strongly toward practitioner identity. We next briefly discuss each activity.

In our survey nearly all the alumni who fill management and executive leadership roles found ways to integrate their learning and research directly into their work.<sup>5</sup> One respondent stated, “the exposure to cutting-edge management topics, like

<sup>3</sup> We identify this relationship as only a potential one because our data do not allow for a more definitive statement. This analysis is left for future study.

<sup>4</sup> For a sample of such statements, see <https://weatherhead.case.edu/degrees/doctorate/doctor-management/videos/testimonials>

<sup>5</sup> We are grateful to one of the reviewers for pointing out that this type of effect is similar to what is sought in most shorter executive education programs, which focus on immediate strategic opportunities, threats, or problems for a single organization and where a range of academic theories and evidence is



the global economy, social construction, appreciative inquiry, and emotional intelligence, helped inform my approach to management” (2016-10).<sup>6</sup> Educational activities included teaching, leadership of university centers, and development of executive education programs and typically were aligned with the research conducted during the student’s doctoral studies. As one alumni stated:

The research has strongly influenced the pedagogy and design of social/cultural entrepreneurship courses I now teach at [my university]. It also is influencing my approach to developing a local ecosystem for the benefit of students, as well as of the local community (2016-07).

Alumni were also involved in consulting and coaching, either internally or externally. In this role, they found new ways to integrate and apply what they learned or researched in the program to their work settings. In discussing the influence of the program on her consulting, one respondent stated, “My research has provided me with numerous consulting and conference speaking arrangements” (2016-21). We also found several sets of activities that were either precursors or preparatory steps for such activities, which we call knowledge productization. This activity was focused on packaging, delivering, and using research knowledge in forms that made it both valuable and easy and legitimate to use across a broad range of management settings and audiences.

Alumni also engaged in several communities of practice by making frequent presentations—often to high-level executives in a position to implement significant changes—and, at times, doing research or consulting work directly aimed at influencing public policy. One alumni’s recent study on corruption in sub-Saharan Africa led

him to write a guide book on anti-corruption measures for use by international organizations (e.g., the World Bank). In some cases, alumni have participated in creating new types of communities of practice by establishing new online fora.

Overall, these eight activities show a cumulative arc of increased scope and richness of application, which starts from individual application and teaching engagements and, fostered by their own research, grows to consulting, knowledge productization, public speaking, and public policy shaping. Naturally, not all alumni were involved in all the activities, and across the student and alumni population, we observed several different profiles of engagement.

The diversity of practical application activities that alumni have engaged in demonstrates a growing width and breadth of possibilities for knowledge application for those who participate in EDPs. Moreover, it illuminates the need for improved metrics and measures for taking stock of and recording these activities in ways that better capture a program’s actual practical effects. Such measures can provide a better foundation for comparing the program’s influence over time, or for comparing executive programs, to better understand all the benefits of engaging in EDPs for each of their stakeholder groups, including students, participating organizations, and involved practitioner communities.

## A DYNAMIC MODEL AND SOME REFLECTIONS

To support future development of EDP practice and theory, we first develop a dynamic model of EDP impact that is based on both the dimensions of personal impact and the activities of practical impact and that is grounded in our analyses of

their interactions. Second, we abstract from the derived activities of practical impact—based on the content and nature of impact—to observe two key roles assumed by practitioner–scholars seeking to make a practical impact where they show cognitive and behavioral leadership. Third, we discuss the role of practical context in evaluating the impact of the EDPs.

### A Dynamic Model of EDP Impact

Based on our previous discussion, we can organize the six dimensions of personal impact in relation to one another as a set of concurrent processes; each dimension influences other dimensions so that changes can emerge in any other dimension as one dimension changes. This co-occurrence of effects is illustrated in Figure 1, in which the expansion of practitioner–scholar identity in the EDP program facilitates a deepening cognitive development. This development is triggered by new ideas and logics introduced in the content courses, by the novelty and challenges associated with working with research knowledge and trying to make valid inferences; and by the need for “epistemic” distancing from the students’ experience-based practical knowledge anchored in specific settings. As students learn and assimilate richer and varied cognitive frames, make novel inferences, engage in alternative types of reasoning, and question the foundations of their knowledge, their thinking changes. Simultaneously, their identity starts to transform. As their current practitioner identity increasingly is examined and challenged, they begin to see themselves as scholars who need to look at their practitioner identity and behavior “from outside.” This self-study coincides with the activities that create new forms of belonging and community as the students more deeply socialize into their cohorts and sister cohorts, as they forge fresh connections

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used to inform the search for opportunities, to resolve threats, and to address problems. The difference between them is that, many times during the EDP programs, the effects often are unexpected, serendipitous, and more widely dispersed because of the rich range of topics and issues covered in EDP programs that become “fortuitously and “randomly” matched with issues that the students and alumni face.

<sup>6</sup> The code refers to the year of the survey/data collection and the number of the interviewee being quoted. The interviewee’s actual identity is hidden for purposes of anonymity.

with other students and faculty, as they gain new affective experiences from new forms of learning and knowing, and as they expand their range of questioning. These changes influence the students' striving toward stronger academic contributions with the help of faculty. They also directly lead to new practical applications of the knowledge in their own work, which further promotes and accelerates the ongoing cognitive and identity change. Together, all these changes, in later phases of the program, advance an individual's career mobility.

In addition to this internally engendered outward processing of effects, several other feedback loops also are present: Practical applications and academic contributions inform each other and shape

further cognitive and identity development. We also note an inward process of practical applications and academic contributions, which affect both an individual's sense of belonging within new scholarly communities and her or his new sense of self. According to this model, when EDPs are properly implemented and contextualized, they ultimately catalyze multi-level processes of impact both within the students and in the students' external environments. The processes appear to be concurrent and mutually reinforcing, and they invite students to cumulatively acquire a wide range of cognitive and social skills during the program that orient them to the world in novel ways and shape them as practitioner-scholars.

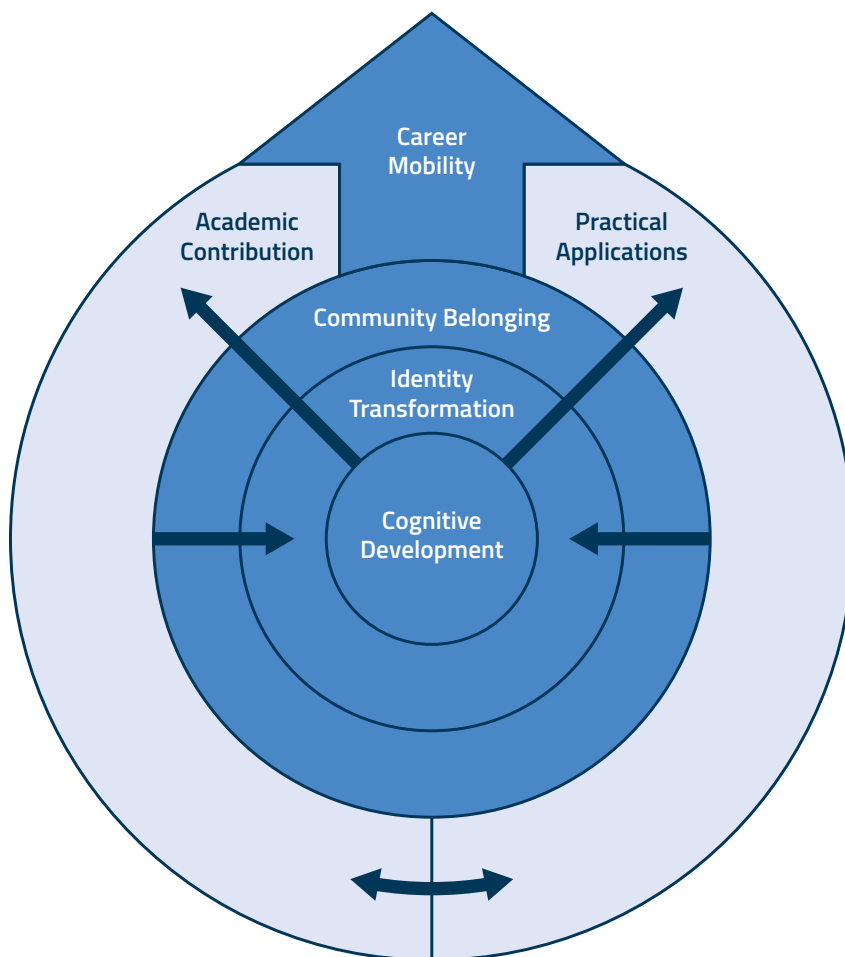
### Thought Leadership and Practical Leadership

Producing EDP alumni who adopt the identity of practitioner-scholars is only a means to a desired end. This goal, or telos, is improved production and practical application of knowledge resulting in evidence-based influence on managerial practice that, in the improvement engendered, can allow the practice to be perceived by practitioner-scholars as a "noble profession." We have identified eight types of practical application activities for achieving such an impact. These eight activities offer a valid initial empirical classification of the types of behaviors participants exercise and the context in which they do so to reveal the programs' practical impacts. However, these activities do not clarify the content and the purposes of the impact. To this end, we further group the activities into two broad types of evidence-informed management behaviors: 1) offering knowledge to others, and 2) engaging with others in practice based on new methods and practices of knowing.

The behavior of offering knowledge comprises the activities of teaching, public speaking, and knowledge productization. This category can be termed the pursuit of *thought leadership*. It views the practitioner-scholar as engaging other practitioners across settings in pedagogic and didactic processes in a relatively limited fashion, as in Mode 1 knowledge dissemination. In this regard, this range of activities emphasizes the scholarly output and dimension of a practitioner-scholar.

The second type of behavior, termed *practice leadership*, involves higher degrees of and more intense involvement with the true managerial "users" based on or informed by the practitioner-scholar's research knowledge. Accordingly, practice leadership encompasses categories of engaging with and creating communities of practice, directly applying knowledge in the alumni's own managing activities; consulting and coaching; and influencing policy.

Figure 1. Dynamic Model of Executive Program Impact





Both types of leadership behavior assume that the knowledge generated or absorbed by practitioner–scholars has relevance and is valid (i.e., it passes common academic tests of rigor in making inferences). The content of knowledge conveyed stems from combining a scholar’s own research findings with additional findings and theories encountered during scholarly inquiry. Except for the case of alumni’s own managing activities, the actual impact of knowledge use depends on the extent to which other managers assimilate and apply this knowledge in their activities, including their decision-making. Sometimes, this transmission of knowledge poses challenges in thought leadership, wherein alumni use their cognitive skills to inform others of the value of their research-based knowledge. If we analyze the potential use of such knowledge from the perspective of the manager or decision maker, assimilation should depend in part on its accessibility, which is often noted as a primary cause of managers’ failure to use research-based knowledge.

Accessibility implies here an improvement in the practitioner–scholar’s competency in translating the research knowledge in content and form into a “package” that is meaningful to the manager in a concrete setting. However, effective application also depends on other factors beyond accessibility. The knowledge produced and conveyed by practitioner–scholars must be perceived by the decision maker as relevant, as timely (having immediacy), and as connecting with the complexities of the manager’s situation. The more a practitioner–scholar can relate to the current focus and ongoing concerns of decision makers, their ways of sense-making and of reading realities, the more likely the decision-making manager is to use the conveyed knowledge. In this regard, one respondent reported having written multiple white papers annually for practitioner communities.

Thought leadership, then, is carried out by conveying timely knowledge that is generated specifically to address a range of (wicked) problems that currently vex orga-

nizational leaders. This knowledge needs to take the targeted leader’s context into account, including its history, and identify constraints as well as opportunities associated with the problems on which the leader is focused.

Practice leadership offers an avenue to overcome the challenges in convincing others to use and value evidence-based knowledge. EDP alumni, as practitioner–scholars, already can engage within a community of practice and use their locally embedded knowledge not only to guide their own actions but also to influence others in engaging in varying forms of collective action. The success of practitioner–scholars in influencing such action rests not only on the relevance and rigor of their locally invested knowledge, but also on their interaction competencies. In EDPs, these skills typically stem from courses that seek to enhance their interaction competencies that for example focus on research knowledge dissemination, consulting skills and the like, as well as from experiences of interacting with others during research (e.g., conducting intensive qualitative interviews or running focus groups). Such skills also emerge from the practitioner–scholars’ hard-won and broad experience as leaders. Being leaders in practice communities grants them a different degree of legitimacy among colleagues and encourages other members to participate in, and potentially spread, the use of the practitioner–scholar’s knowledge.

This engagement in a process of practice leadership aligns well with the informal and fully engaged nature of Mode 2 knowledge dissemination, while thought leadership broadly reflects the behaviors associated with more traditional academic, Mode 1 dissemination processes. Practitioner–scholars can learn to become comfortable and proficient in both types of leadership. Specific combinations of these two types of leadership, such as creating knowledge products disseminated through consulting activities and presenting knowledge in an accessible and useful

form to a specific professional group, can be especially impactful.

### **Two Primary Contextualized Tasks: Consulting and Educating**

Applying the model constructs to our survey findings, we note two types of practical context that stand out as having significant potency in shaping current managerial practices: (1) consulting founded on research knowledge and findings, and (2) content-based interventions in executive education informed by research findings. Consulting that relies on evidence-based knowledge can combine thought leadership and practice leadership by working with management groups to produce knowledge-based products or processes that meet organizational needs. The prospect of a direct and timely impact typically is high, as is the frequency of engagement with decision-makers. When the consulting activity involves a powerful institutional actor (e.g., the United Nations or State committees), the alumni’s potential impact grows significantly, both across time and in reaching a target audience wielding the power to act on the consulting and produce change.

In executive education, attendees self-select and are likely to see the knowledge presented as immediately relevant to their ongoing interests. Practitioner–scholar instructors rely more heavily on thought leadership when they engage in executive education; they also gain legitimacy and influence not only because of their instructor role but also based on their visible standing as an experienced practitioner (“been there, done that”). In this regard, executive education provides an opportunity for engaging with consequential decision-makers. Networking opportunities during and after the executive education also create improved prospects for reinforcing the knowledge gained during the education engagement. Our survey data reveal that several alumni led executive education programs with some success, and some had also created specialized curricula to shape the content and forms of executive education sessions, based on

specific combinations of practical insight and understanding and synthesis of relevant research knowledge.

## LIMITATIONS AND FUTURE RESEARCH

We note several limitations in our argument and underlying evidence. First, evidence is limited to data solicited from written answers to open-ended survey questions. Another (perhaps better) alternative would have been to use semi-structured interviews that allow for further depth in interviewee responses and for interviewer probing. Although such data collection forms are time-consuming and are challenging to scale, we plan to use such data gathering in the future to validate and expand the suggested conceptualization of impact. Second, students at and alumni from the Case-Western EDP, from which our data were drawn, participate in intense cohort formats and rigorous course-based education through their three years of study, and whether our conceptualizations can be generalized to other EDP settings is uncertain. Nor do we control for or evaluate the effects of social networks and cohorts, in which different examples and role models might emerge. Third, our qualitative data include some self-selection bias. We suspect that scholar-practitioners who have benefited from and more effectively applied the skills acquired during the program are more likely to respond. Therefore, the data on impacts are potentially more positive than if the whole population is considered. Fourth, given that all our data stem from the EDP setting, we do not have a true counterfactual; we cannot confirm that the alumni would not have engaged in the activities and engagements if they had not participated in the program. Nevertheless, we can offer two observations that favor participation in the program as a causal element in our findings and confirm the usefulness of the resulting model. The students often referred to new cognitive skills and new orientations (as part of their identity) that would be extremely difficult to replicate and create in other

than doctoral training settings. Moreover, the students provided what they considered accurate and sincere, and many times even emotional, accounts of their experience. Although they might be influenced by anchoring effects and desirability biases, we suspect that the reporting reflects accurate accounts of the perceived impact and role of the program.

For future research, we are working to identify appropriate metrics for measuring the impacts of an EDP. These impacts are surprisingly under-researched, given that they serve as the ultimate criteria for evaluating and improving managerial education. Research to develop such metrics would help to expand beyond the specific program considered and provide a useful tool for measuring the effectiveness and impact of a larger population of EDPs. Especially needed measures include the frequency and magnitude of impact on managerial practice, which would expand and refine the activities of practical application identified in this research.

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## APPENDIX A: RESEARCH DESIGN

The data set was obtained from the students and alumni of Weatherhead School of Management Doctor of Management (DM) Program. The Weatherhead program was instituted in 1995 at Case Western Reserve University as the first executive doctoral program (EDP) in the United States. From its inception, the program's aim has been to offer a meaningful and new kind of scholarly management education as a terminal management degree. The education is grounded in generating and deploying resources, based on rigorous evidence and inferences, to direct managerial action and decisions. A secondary aim is to endow students with broad and systemic knowledge of the global business environment, extending beyond the functional and professional knowledge delivered by curricula for Masters in Business Administration degrees by including curricula delivered by humanities, social sciences, and other faculty. In this program, and in others that have followed, the combination of rigorous empirical inquiry and theory-based reasoning is expected to cultivate managers as critical thinkers and effective actors who are able to identify, create, and use evidence-based knowledge to improve complex managerial tasks. In this regard, the study site and setting are ideal for evaluating the potential practical impacts and their dimensions for EDPs.

In 2015 the Weatherhead EDP reached its twentieth anniversary, and we used this milestone as an opportunity to conduct an exploratory, qualitative study of the practical impacts of the program.<sup>7</sup> Our goal was to evaluate the success of the program in influencing managerial practice by seeking answers to the following initial questions:

1) *What effects has the program had on managerial practice, and how has it helped students and alumni act as effective managers?* Related questions include the following: What types of identity transformations take place among program

participants, and how do they influence competency building? What knowledge has *actually* been used by the alumni in their practical work? Has the program produced knowledge that influenced alumni's behaviors?

- 2) *What types of activities do alumni pursue post-graduation, and how do they draw on the knowledge and competencies gained and thereby impact in new ways their managerial practice?* For instance, what types of *knowledge products* have the alumni produced, in what contexts, and for what purposes?
- 3) *What can we learn from graduates' achievements to formulate better constructs for measuring the program's impact on managerial practice?*

To address these questions, we designed a survey targeted toward the program alumni in 2015. The survey was designed jointly with the program alumni council and contained both structured and open-ended questions. Responses to the open-ended questions enabled us to analyze and distill different types of impacts, contexts of their emergence, and related antecedents. All responses were gener-

ated anonymously to ensure authenticity and to avoid social desirability effects. Although some selection bias likely remains in that those alumni who have been able to produce more practical impacts and had a more positive attitude toward the program were more likely to respond. However, this bias does not influence adversely the study goal of identifying practical impact dimensions and their possible antecedents.

The survey was delivered via email to the full population of more than 200 program alumni. We received 46 survey responses – a 23% response rate. In addition to completing the survey, we asked alumni to send us their resumes so that we might triangulate and further understand their survey responses, and we included in the data set more than 20 resumes. The detailed demographics of the sample are given in Table 1. The sample represents the overall population in terms of gender and age distribution. Demographic information on race, ethnicity, and country of origin were not collected.

**Table 1. Response Demographics**

Demographic Data	Categories	Number of Responses
Gender	Men	31
	Women	15
First year of study	1995–2000	10
	2001–2005	11
	2006–2010	18
	2011–2012	6
	no response	1
Age at start of program	35–44	10
	45–54	31
	over 54	5

Note: n=46

<sup>7</sup> We collected similar data sets in 2008 and 2005, but their collection was not as systematic, and therefore we rely only on the latest data set.

## Data Analysis

Open-ended survey responses were entered in an Excel spreadsheet, where the notes function was used to assign inductive, at times “in-vivo” codes to each survey response (Corbin & Strauss, 2008). Through this process, we identified 477

initial first-order codes. These codes were then aggregated to highlight connections and patterns between related codes, resulting in 195 second-order codes. The final lists of both first-order and second-order codes were used to generate 25 higher-order themes that ultimately were reduced to 6 final aggregate dimen-

sions (Charmaz, 2006; Gioia, Hamilton, & Corley, 2013). These dimensions are interpreted to represent major types of program impact as experienced by the alumni. See Table 2 for the first- and second-order coding structure, as well as aggregate dimensions. See Table 3 for sample quotes resulting in this coding.)

**Table 2. DM Program Impact Coding Structure**

% of Sample	Exemplar First-Order Codes	% of Sample	Second-Order Themes	% of Sample	Aggregate Dimensions
21.74%	Appreciation of skill development	65.22%	Skill Development	80.43%	Cognitive Development
4.35%	Value of what I have learned	45.65%	Knowledge Acquisition		
2.17%	Value of learning to think differently	32.61%	Change in thinking		
2.17%	Taking classes after receiving degree	2.17%	Continuing Education		
4.35%	Value of establishing credibility	23.91%	Establishing Credibility	50.00%	Identity Transformation
4.35%	Research findings gaining recognition	21.74%	Receiving Recognition		
2.17%	Confidence built in academic settings	10.87%	Gaining Confidence		
2.17%	Value of growing as a person	4.35%	Personal Development		
2.17%	Research enabled fitting in at work	10.87%	Membering	28.26%	Community Belonging
4.35%	Value of developing network in field	4.35%	Networking		
10.87%	Value of friendship	19.57%	Making Friends		
2.17%	Value of alumni network	4.35%	Keeping in touch		
2.17%	Program developed my life direction and plan	26.09%	Change in Career Path	41.30%	Career Mobility
4.35%	Received new job opportunity after receiving degree	15.22%	New Opportunities		
2.17%	Received promotion after receiving degree	6.52%	Promotion or Raise		
4.35%	Research prepared me for career in academia	6.52%	Prepared for Academia		
4.35%	New leadership role found after graduation	17.39%	Leadership		
54.35%	Conducting new research since graduation	54.35%	Conducting Research	95.65%	Academic Contribution
23.9%	Research findings have been published	52.17%	Research Dissemination		
6.52%	Presented research at conference	84.78%	Presentation of Work		
2.17%	Mentored PhD candidates	4.35%	Academic Service		
2.17%	Received grant for new research	2.17%	Research Grant Received		
4.35%	Served as interim dean	6.52%	Holding the Role of Dean		

% of Sample	Exemplar First-Order Codes	% of Sample	Second-Order Themes	% of Sample	Aggregate Dimensions
23.91%	Research findings used to inform teaching	82.61%	Teaching or Educational	100%	Practical Application
26.09%	Research findings used to inform consulting	32.61%	Consulting or Coaching		
4.35%	Research findings integrated into management responsibilities	19.57%	Management		
2.17%	Knowledge product created – certification	13.04%	Knowledge Productization		
2.17%	Member of a research-topic association	4.35%	Engagement in Communities of Practice		
2.17%	Started a practitioner membership organization	2.17%	Creating Communities of Practice		
67.39%	Presentation to management leaders	86.96%	Public Speaking		
2.17%	Research findings directly influenced public policy	2.17%	Influencing Policy		

The columns labeled “% of sample” display the percentage of the sample where each code was found. For example, 21.74% of the sample displayed appreciation of skill development, whereas 4.35% of the sample expressed the value of what they have learned. The aggregate dimensions reveal that the entire sample is engaged in practical application (100%), almost all are en-

gaged in academic contribution (95.65%), and the vast majority experienced cognitive development (80.43%). In addition, 50% expressed identity transformation, about 41% expressed career mobility, and about 28% expressed community belonging. We do not assume that the lower levels of community belonging and identity transformation stem from a lower preva-

lence; rather, the survey questions asked were more likely to generate responses and information about the other more obvious areas of impact. That community belonging and identity transformation emerged as facilitating impacts in practitioner–scholars’ journeys suggests the importance of measuring these factors in both research and program evaluation.

**Table 3. DM Program Impact Coding Exemplar Quotes**

Aggregate Dimension	Second-Order Theme	Exemplar Quote
Cognitive Development	Skill Development	“The skills I learned conducting the research have completely changed the way I approach problems in my professional work. I now research a problem or situation before attempting to solve it.” (2016-33)
	Knowledge Acquisition	“The knowledge I gained in completing [my research] helped position me as a leader in addressing Northeast Ohio workforce development challenges. Further, the exposure to cutting-edge management topics, like the global economy, social construction, appreciative inquiry, and emotional intelligence helped inform my approach to management.” (2016-10)
	Change in Thinking	“I see and understand the world quite differently than I did before acquiring the intellectual skills the program offers.” (2016-04)
	Continuing Education	“Leadership Educators Program [University]” (2016-04 CV)



Aggregate Dimension	Second-Order Theme	Exemplar Quote
Identity Transformation	Establishing Credibility	"Within the organization of my primary employer, I am developing a reputation as the 'go to' guy for matters related to social dynamics impacting business. As a result, both my job security and visibility have increased along with my compensation." (2016-06)
	Receiving Recognition	"The message about my research findings is just beginning to gain some recognition in my professional field." (2016-01)
	Gaining Confidence	"I'm much more of a critical thinker. I challenge things that I used to accept because it was how things were done. I'm also much more confident about taking a position that is contrary to the group or about speaking up first with ideas that may not jive with established thinking." (2016-08)
	Personal Development	"My doctoral program experiences have been extremely valuable in many ways, especially in giving me the confidence and tools in looking at the world in a more sophisticated, emphatic (AU: empathetic?), and nuanced way." (2016-39)
Community Belonging	Membering	"My dissertation advisor invited me to present my qualitative and quantitative research results to this leading group of scholars and researchers in emotional and social intelligence. This has connected me to the thought leaders in this field that is so critical to my career and profession." (2016-30)
	Networking	"I established a network in the technology-based economic development community, which led to a career change less than a year after I graduated in [year]. I continue to thrive in that field." (2016-12)
	Making Friends	"I do now have the class network that was established during the program, but this has been purely a social network rather than anything related to my professional life." (2016-34)
	Keeping in Touch	"I made several close friends in the program, with whom I stay in close contact. In fact, five of us have formed a book group, and we have monthly conference calls to discuss the books." (2016-37)
Career Mobility	Change in Career Path	"The program has accelerated my life transition on both the professional and personal sides. I was able to design a roadmap using ICT and to execute it for the next chapter of my life. The program helps me conceptualize and productize my new career." (2016-11)
	New Opportunities	"I found applications from this in my daily management at my institution where, since graduation I have a new leadership role in the college's governance committee for the lead educational body (department chairs) of the college." (2016-23)
	Promotion or Raise	"Both my job security and visibility have increased along with my compensation." (2016-06)
	Prepared for Academia	"Completing my thesis, which was very challenging for me, prepared me for my following career change to academia from industry. I do not think I would have been hired without going through the thesis creation process that is having a doctorate degree from Case." (2016-16)
	Leadership	"Chairperson of Committee for NASDAQ-traded [Company]." (2016-01 CV)
Academic Contribution	Conducting Research	"There are three areas of inquiry that I am working on..." (2016-07)
	Research Dissemination	"My research was the foundation of the 5 books I published and co-edited. Each book sold well, and the feedback from pricing and business professionals was very good." (2016-11)
	Presentation of Work	"I have presented at universities overseas." (2016-07)
	Academic Service	"I have mentored PhD candidates." (2016-05)
	Research Grant Received	"Foundation Grant: 2010" (2016-03 CV)
	Holding the Role of Dean	"Associate Dean of [Department]" (2016-15 CV)

Aggregate Dimension	Second-Order Theme	Exemplar Quote
Practical Application	Teaching or Educational	"Yes, my research is included in my courses and teaching responsibilities." (2016-03)
	Consulting or Coaching	"My research has provided me with numerous consulting and conference speaking arrangements." (2016-21)
	Management	"Further, the exposure to cutting-edge management topics, like the global economy, social construction, appreciative inquiry, and emotional intelligence helped inform my approach to management." (2016-10)
	Knowledge Productization	"As a result of my research I have developed tools for board evaluations and skill assessments that have been utilized across various boardrooms." (2016-24)
	Engagement in Communities of Practice	"I am working with several organizations at this point to adopt the data-collection tool in their practices." (2016-01)
	Creating Communities of Practice	"[Group Name] – Convened 25 organizations interested in membership" (2016-08 CV)
	Public Speaking	"I present my findings about every 2 months to some interested group/association." (2016-01)
	Influencing Policy	"Hosted numerous roundtables and events connecting cluster members to federal and state leaders." (2016-08 CV)

After identifying the initial themes and dimensions, we coded the set of sampled resumes at the level of second order codes to validate our initial findings and to build a more robust model. In analyzing the resumes, we also checked to see whether any other types of impact not already represented in the analysis of the survey responses emerged. From this secondary analysis, six additional second-order codes were identified, while the six previously identified impact dimensions also were validated.

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